

The Bellevue Classification System: nursing's voice upon the library shelves*†

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This article examines the inspiration, construction, and meaning of the Bellevue Classification System (BCS), created during the 1930s for use in the Bellevue School of Nursing Library. Nursing instructor Ann Doyle, with assistance from librarian Mary Casamajor, designed the BCS after consulting with library leaders and examining leading contemporary classification systems, including the Dewey Decimal Classification

and Library of Congress, Ballard, and National Health Library classification systems. A close textual reading of the classes, subclasses, and subdivisions of these classification systems against those of the resulting BCS, reveals Doyle's belief that the BCS was created not only to organize the literature, but also to promote the burgeoning intellectualism and professionalism of early twentieth-century American nursing.

INTRODUCTION

To the leading educators of early twentieth-century American nursing, the library was both the intellectual and professional nexus of the hospital-based training school. The book, long an erudite commodity, and the library, the book's complementary and edifying milieu, were idealized by nursing leaders as proof of the ascending status of the nursing educational system [1]. The development of the Bellevue Classification System (BCS) for the library of New York's Bellevue Hospital School of Nursing is a particularly striking example of the connection between early twentieth century libraries and nursing's intellectual history. Created by Bellevue instructor Ann Doyle during the early 1930s, the BCS had a significant impact on formal nursing libraries. Indeed, the National League for Nursing Education (NLNE), the leading voice of professional nursing education, endorsed the BCS in its *Library Handbook for Schools of Nursing* [2]. Published in full in the *Library Handbook's* inaugural 1936 edition, the BCS was revised and published again in the *Library Handbook's* 1953 edition. Widely disseminated in this resource, the BCS was utilized in nursing school libraries across the country.‡

The BCS, if remembered at all, has been understood as simply an organization tool, created to guide the placement of information in the growing nursing library [3]. To appreciate only this aspect, however, overlooks the careful processes of construction that

Highlights

- During the early twentieth century, nurses looked to the library to project nursing as both an intellectual and professional pursuit.

Implications

- Library classification systems both represent and reflect the culture from which they came. They represent an unconventional historical source that can provide unique insight in to the past.

went into creating the BCS. Doyle carefully examined other relevant classification systems and found them inadequate to capture the domains of knowledge needed for nursing and nursing practice. This research focuses on close textual reading of these various contemporary systems, juxtaposed against the resulting BCS. In doing so, it seeks to capture the intellectual drive of early twentieth-century American nursing. The BCS was designed for the meaningful placement of nursing-related print knowledge to be utilized by practicing nurses, educators, and nursing students, and its creation can be best understood as a symbol of the intellectual climate of early twentieth-century American nursing, mediated through an acknowledged, uniquely classifiable professional library.

BELLEVUE AND THE DEVELOPMENT OF ITS LIBRARY CLASSIFICATION SYSTEM

The Bellevue Training School for Nurses, as the school was originally named, opened in 1873 as one of the first American nurse training schools built on the principles

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‡ Evidence of the Bellevue Classification System (BCS) in practice can be seen in the historical books housed in the University of Pennsylvania's Barbara Bates Center for the Study of the History of Nursing. The center's book collection is an assemblage of print materials of historical importance donated by nursing libraries throughout the greater Philadelphia and New York City metropolitan area. On the spines of books from the following libraries there remain the call numbers of the BCS: School of Nursing Library, Albert Einstein Medical Center, Northern Division (New York); School of Nursing,

Mt. Sinai Hospital (New York); Nurses Training School, Jewish Hospital Association of Philadelphia; The Presbyterian Hospital School of Nursing (Philadelphia); School of Nursing Library, Philadelphia General Hospital; and Hospital of the University of Pennsylvania, Nurses Library (Philadelphia). Preliminary evidence gathered by the author seems to indicate that as training schools such as these closed or merged into collegiate settings, the BCS faded from use during the second half of the twentieth century.

of Florence Nightingale [4].[§] Early on, the school began a sartorial tradition when it designed and implemented the first student nursing uniform [5]. Slightly later, it also began the tradition of “pinning,” bestowing a Tiffany & Company designed pin upon graduating nurses [6]. In 1888, the first professional school of nursing for men, the Mills School, was incorporated into Bellevue by the school’s Board of Managers [7]. Snippets of the school’s curriculum were featured in a running series of early articles in the *American Journal of Nursing (AJN)*, the official publication of the American Nurses Association, where selected examples of Bellevue students’ lecture notes were reproduced [8]. The school also held a reputation for producing distinguished graduates, including early twentieth-century leaders such as nursing educational reformer Isabel Hampton Robb and Lavinia Dock, one of nursing’s most outspoken feminists.

Continuing its tradition of trailblazing, Bellevue, long home to one of the largest nursing libraries, would take an active role in promoting these printed nursing collections. By the end of the 1920s, the contents of the nursing library were increasingly understood and presented as being central to the educational mission of nurse training schools. Much of the Bellevue’s momentum in this realm developed during the tenure of Marion Rottman Fleming, the principal of the Bellevue Training School for Nurses from 1925 to 1935 [9]. In addition to this position at Bellevue, Fleming was also active in the NLNE, holding the position of treasurer from 1924 to 1934 [10]. The nursing library, discussed with increasing frequency in her organizational circles, would come to occupy an important place in her vision of Bellevue’s future.

As growth demanded expansion, Doyle (Figure 1), Bellevue instructor in out patient and public health nursing, began her investigation, at Fleming’s request, into the library’s classification needs in 1933 [11]. Doyle’s belief in the library as a place of central importance is clear. By the close of the decade, Doyle had authored six articles on the nursing library, influenced the creation of several others on the same topic, and took the lead in the reconfiguration of Bellevue’s library [12]. Dismayed by the inability of the Dewey Decimal Classification (DDC) system to adequately classify her school’s small but highly specialized collection, Doyle decided to search the field for a classification scheme acceptable to the particular needs of nursing. As part of this process, Doyle evaluated popular library classification systems, visited leading libraries, and contacted leaders in the library field. She wrote to such luminaries as Herbert Putnam, then librarian of Congress, and Colonel Fielding Garrison, librarian of the Welsh Medical Library at Johns Hopkins University (and immediate past editor of the Army Medical Library’s [the National Library of Medicine] *Index Medicus*, the ground-breaking, govern-

ment-sponsored index of medical journal subjects) [13]. In his July 1933 response to Doyle’s inquiry, Garrison recommended that she “make your own classification along broad and simple lines, including the subjects you mention, as your collection is, in all probability, not a large one” [14] (Figure 2). ** His thoughts mirrored Doyle’s own: “a special scheme would have to be constructed” [11].

Doyle would actually reproduce Garrison’s letter in full in future BCS publications. She did not reprint Garrison’s letter merely as ornament. Doyle included his words to stress the importance of her classification system. Garrison, an eminent librarian and physician, represented the highest echelons of the American medical library community. Although the note was perhaps written in a tone of veiled patronization, Garrison’s personal attention to the matters of a school of nursing and the contents of its library added gravitas to Doyle’s classification crusade. He did not dismiss her inquiry as trivial, neither did he ignore it; instead he offered her pointed advice: create your own nursing classification system. In short, Garrison offered the nursing school library legitimization. In printing his words, Doyle passed this sentiment on to her readers. The ascending nursing educational system was receiving credence and respect.

To create her new classification scheme, Doyle enlisted the assistance of Mary Casamajor, a former librarian of the National Health Library (NHL) [15]. This library, housed at New York City’s National Health Council, contained one of the most important contemporary public health collections in the United States [16]. For over a year, Doyle and Casamajor worked together, crafting a classification system

** Doyle included an actual image of Garrison’s letter in her first BCS publication: A classification for a nursing school library. *Am J Nurs.* 1934 Sep;34(9):872. She included a typed reproduction of the letter in the National League for Nursing Education’s Library Handbook, 1936. p. 193. Garrison’s response read:

July 19, 1933

Dear Madam:

Your letter of July 13 was forwarded to me here. I think the simplest and best way out of it would be to make your own classification along broad and simple lines, including the subjects you mention, as your collection is, in all probability, not a large one. If you wish to tag your books with a complex formula of numerals, the big general alphabetic directory to the Library of Congress classification would be your best guide, but it is intended for the L. of C. stacks, which are virtually a large city, with streets, numbers, names of inhabitants and N. S. E. and W. quarters; in brief, a city directory too elaborate and complex for a small collection, probably in one room, which might be likened to a village in which everybody knows everybody else. I think the main grand divisions of the Ballard arrangement, plus whatever else you choose to add, would serve your purpose best in the long run.

Very truly yours,

Fielding H. Garrison

As an aside, Garrison’s assumption regarding the size of Bellevue’s library collection was correct. In 1934, it was rather small, comprising some one thousand books. For more information on the library at Bellevue, see: Board of Managers. Annual report of the Bellevue Training School for Nurses. New York, NY: Bellevue; 1934–1935. p. 23.

[§] The Bellevue Training School for Nurses, as it was first called, opened in 1873. During this year, the New Haven Training School for Nurses as well as the Massachusetts Hospital Training School for Nurses also opened. For more information see: Goodnow M. Outlines of nursing history. 4th ed. Philadelphia, PA: W. B. Saunders; 1931.

Figure 1

Ann Doyle as she appeared in the 1942 Crane & Cross, Bellevue School of Nursing's Yearbook



MISS ANN DOYLE

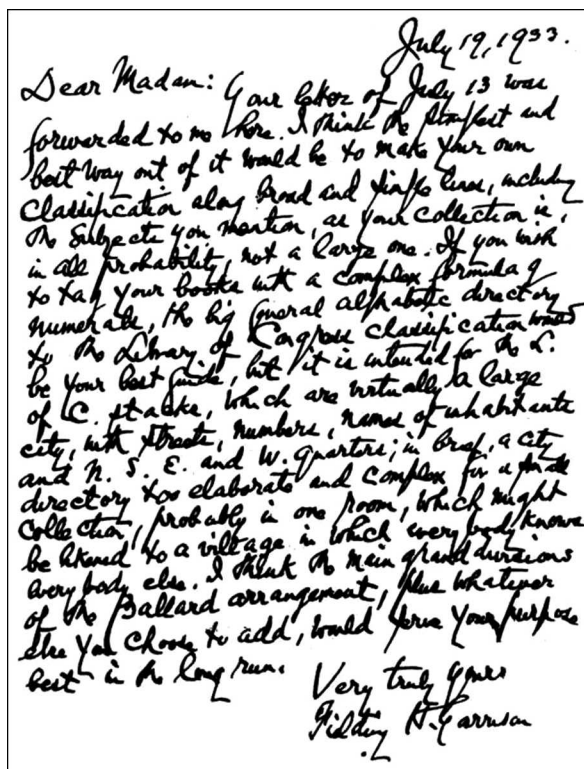
drawn from such diverse schemes as the Library of Congress (LC), DDC, Ballard (Boston Medical)^{††}, and the NHL [17] (Table 1).^{‡‡} The resulting BCS, based on a decimal plan, comprised ten main classes, much like the DDC system [18] (Table 2). In 1934, Doyle published her system in outline form in the *AJN*. Each BCS class was divisible into ten subclasses, with further specificity available via subdivisions and decimal divisions. The full version was made avail-

^{††} The Boston Medical Library's classification scheme had its beginnings in 1877. In 1918, the library's well-known librarian, James Ballard, heavily revised this initial scheme. The resulting scheme assigned numbers for classes and letters for subclasses. The scheme was so well received that, in 1921, it was adopted as the official classification system of the Medical Library Association. Soon thereafter, the scheme was commonly referred to as the Ballard. For more information regarding the Boston Medical Library, see: Farlow J. *The history of the Boston Medical Library*. Norwood, MA: Plimpton Press; 1918.

^{‡‡} The National Health Council of New York City was founded in 1921 when eleven national health organizations, including the American Nurses Association, combined to better promote the health of the nation. Upon formation, the council established the National Health Library (NHL). The resulting library, comprised four different collections (mental hygiene, social hygiene, tuberculosis, and nursing) and developed a unique decimal classification system. For more about the NHL, see: Hawkins ER. *The National Health Library*. *Bull Med Libr Assoc*. 1952 Jul;40(3):315-21.

Figure 2

Letter from Colonel Fielding Garrison to Ann Doyle



able in 1936, published as the centerpiece of the NLNE's *Library Handbook for Schools of Nursing* [18].

Given contemporary popularity of the DDC, patterning the BCS after this scheme is not surprising. Furthermore, it should be considered that the BCS was intended to be implemented in nurse training school libraries and that student nurses would have ranked among the most common users. As a constituency typically entering training with at most a high school degree, a scheme patterned on the DDC, utilized heavily among school and public libraries, would have been more intuitive to novice nurses. A BCS physically akin to either the LC, most commonly used in universities, or the Ballard, uncommon and unsuitable outside of medical realms (into which the students had not even entered), would have necessitated a steep learning curve.

CLASSES AND CONTENT OF THE BELLEVUE CLASSIFICATION SYSTEM

Doyle and Casamajor based the BCS's subject content on "published curricula of schools of nursing; and upon the literature of the field of nursing, which shows not only the current fields and practices but the trends which forecast future development" [11]. While the subject headings of the BCS might have been supported by contemporary nursing curricula and practice trends, large portions of BCS were actually patterned on the classification systems that

Table 1

Overview of classification systems consulted by Doyle

Dewey's Decimal System (1929)	Library of Congress (1904)	Boston Medical Library (Ballard) (1919)	National Health Library (1939)
0 General works	A. General Works. Polygraphy	1. General Reference Works. History...	000 General
1 Philosophy	B–BJ. Philosophy	2. Biology	100 Sociology
2 Religion	BL–BX. Religion. Theology	3. Anatomy.	200 Public health
3 Social sciences	C. History. Auxiliary Sciences	4. Physiology.	250 Public health nursing
4 Filology	D. History. Universal & Old World	5. Physiological Chemistry...	300 Personal hygiene
5 Pure science	E–F. America	6. Theory and Practice of Medicine.	400 Child welfare
6 Useful arts	G. Geography. Anthropology	7. Clinical Medicine.	500 Education
610 Medicine	H. Social Sciences	8. Pathology.	550 Nursing education
7 Fine Arts	H–HA. General Works. Statistics	9. Bacteriology.	600 Medicine
8 Literature	HB–HJ. Economics	10. Parasitology. Parasitic Diseases...	700 Science
9 History	HM–HX. Sociology	11. Diseases Due to Specific Infection.	800 Religion and ethics
0 General works	J. Political Science	12. Diseases Due to Specific Infection.	
	K. Law	13. Disorders of Metabolism.	
	L. Education	14. Blood, Lymphatics and Ductless Glands. Internal Secretions.	
	M. Music	15. Circulatory System.	
	N. Fine Arts	16. Digestive System.	
	P. Languages & Literature	17. Genito-Urinary System.	
	Q. Science	18. Locomotor System.	
	R. Medicine	19. Nervous System.	
	RT Nursing	20. Respiratory System.	
	S. Agriculture	21. Medical Geography...	
	T. Technology	22. Therapeutics. Pharmacology...	
	U. Military Science	22T. Nursing	
	V. Naval Science	23. Surgery.	
	Z. Bibliography. Library Science	22T. Therapeutics...Nursing	
		24. Gynecology.	
		25. Obstetrics.	
		26. Pediatrics.	
		27. Dermatology.	
		28. Ophthalmology.	
		29. Otology.	
		30. Dentistry.	
		31. State Medicine.	
		32. Hygiene.	
		33. Military and Naval Medicine...	
		34. Medical Jurisprudence...	
		35. Veterinary Medicine.	
		36. Natural History.	
		37. Inaugural Dissertations...	
		38. Directories, Almanacs...	
		39. Hospital Reports.	
		40. Public Documents.	
		41. Periodicals and Serials.	
		42. Publications of Societies.	

Doyle and Casamajor referenced. A class-by-class textual analysis of the BCS in the *Library Handbook's* 1936 edition reveals the influences of contemporary editions of the DDC, LC, Ballard, and NHL classification schemes, as well as important differences between these systems and the resulting BCS.

General (000)

The BCS began with the class *General (000)*. Immediately apparent are three asterisks aside subclasses *Bibliographies (010)*, *Dictionaries (030)*, and *Association Reports (060)*. The affiliated footnote alerted readers to the words of Dorkas Fellows, editor of DDC Classification and Relativ [sic] Index (note the use of phonetic, "simplified" English, of which Dewey was a staunch proponent; consequently, it seems Fellows was as well):

While the tables (tho in decimal form) were prepared independently of Melvil Dewey's Decimal Classification, these 3 assignments (010 Bibliography, 030 Dictionaries and 060 Association reports) corresponding to those in his work, as made with the knowledge and unqualified approval of DC [sic] editors. [19]

This was indeed an explicit nod to the influence of the DDC, yet the NHL's classification scheme was most evident in *General (000)*. From those subclasses mentioned above to *Exhibits (050)* and *Laws (Compilations, Codes, and Model Laws) (070)*, complete subclasses and subdivisions featured in the NHL's *General (000)* class reappeared in the BCS. The NHL's subclass *Association and Official Reports and Transactions (070)* contained the subdivisions *Sociological Associations (071)* and *Public Health Organizations (072)* [20]. BCS's analogous *Association Reports and Transactions (060)* subclass contained the remarkably similar subdivisions *Sociological Association Reports (061)* and *Public Health Organization Reports (062)*. Striking similarity existed in both decimal number and wording, yet no explicit comment noted this connection. §§ Most likely, personal decisions between

§§ The numbers are off by 010 due to the BCS collapsing two National Health Library subclasses, *Atlases (020)* and *Almanacs and Yearbooks (030)*, into one in the BCS: *020 Atlases, Maps, Directories, Almanacs, Yearbooks*. See: National Health Library of the National Health Council, Classification outline, p. 2; National League for Nursing Education, Library handbook, p. 196–7.

Table 2
The Bellevue Classification System

000 General

010 Bibliographies
020 Atlases, Maps, Directories, Almanacs, Yearbooks
030 Dictionaries
040 Encyclopedias
050 Exhibits
060 Association Reports and Transactions
070 Laws
080 Statistics and Research Methods
090 Periodicals

100 Natural Science

100 Natural Science
110 Psychology
120 Biology
130 Physiology
140 Anatomy
150 Zoology
160 Chemistry
170 Physics
180 Bacteriology
190 Botany

200 Social Sciences

200 Social Sciences
210 Sociology
220 Social Groups
230 Social Pathology
240 Social Therapy
250 Religion as a Social Institution
260 Economics
270 Political Science
280 Education and Recreation
290 Geography

300 Nurses and Nursing

300 Nurses and Nursing
310 Institutional Nursing
320 Public Health Nursing
330 Private Duty Nursing
340 Governmental Nursing Agencies
350 Nursing by Foreign Countries
360 Nursing by Religions
370 Nursing in Special Fields
380 Practical Nursing
390 Bibliography

400 Medicine

400 Medicine
410 Practice of Medicine (special and specific)
420 Practice of Medicine (systemic)
430 Surgery
440 Obstetrics
450 Pediatrics
460 Gynecology
470 Ophthalmology, Otolaryngology, and Rhinology
480 Pathology
490 Therapeutics, Materia Medica, and Pharmacology

500 Hospital Economy

500 Hospitals and Dispensaries
510 Hospital Construction
520 Hospital Organization and Administration
530 Medical and Surgical Departments of Hospital
540 Nursing Department of Hospital
550 Dietary Department of Hospital
560 Hospital Housekeeping
570 Engineering Department of Hospital
580 Laundry and Cleaning
590 Hospital Social Service

600 Food, Nutrition, and Dietetics

600 Food
610 Food and the Normal
620 Nutrition and Dietetics
630 Food and the Sick
640 Infant Feeding
650 Classes of Foods
660 Dietary Department
670 Health Food Plans and Systems
680 (Unassigned)
690 (Unassigned)

Table 2
Continued

700 Public Health

700 Public Health
710 Organization and Administration
720 Communicable Disease Control
730 Maternity and Child Hygiene
740 Public Sanitation and Hygiene
750 Industrial Hygiene
760 Special Problems and Activities of Public Health Administration and Practice
770 Public Health Nursing
780 Health Services
790 Voluntary Agencies

800 Philosophy, Psychology, Religion

800 General Works on Philosophy, Psychology, Religion
810 Philosophy
820 Psychology
830 (Unassigned)
840 Religion
850 (Unassigned)
860 (Unassigned)
870 (Unassigned)
880 (Unassigned)
890 (Unassigned)

900 General Culture

900 General Culture
910 Literature
920 Biography
930 Geography
940 History
950 Travel
960 Fine Arts
970 Practical Arts
980 Esthetics
990 (Unassigned)

Doyle and Casamajor, the latter a prior member of the NHL community, encouraged such similarities.

Close analysis of the NHL scheme brought to light another interesting aside. As the editor of the DDC, Fellows approved three subclasses for use in the BCS: *Bibliography*, *Dictionaries*, and *Association Reports*. The NHL scheme featured the same three classes. While the blessing of DDC bestowed an amount gravitas upon the BCS, it also assured concerned readers that similarities between the schemes were legally permissible. Such concern for external approval indicates that Doyle desired relevance for the BCS outside of the halls of Bellevue. The NHL however made no mention of personal communications from Fellows. With subclasses akin to those in the BCS, the NHL no doubt relied on the DDC during the construction of its classification scheme. Yet no caveat of approval was discovered in the NHL's scheme. It seems as if the makers of the NHL scheme did not anticipate (or did not need) outside relevance, thus they did not look for explicit approval.

Natural Sciences (100)

Evidence shows Doyle drew heavily upon the DDC while creating the BCS *Natural Science* (100) class [21]. With the exception of the subclasses *Anatomy* (140), *Psychology* (110), *Physiology* (130), and *Bacteriology* (180), the BCS used the same categories found in the DDC's analogous *Pure Science* (5) [22]. Although some of the DDC's scientific subclasses were removed from

the BCS, Doyle did not ignore these alternative facets of science. Rather, she noted to readers that the BCS *Natural Science* (100) subclass was reserved for "Mathematics, Astronomy, Geology, Paleontology and other natural sciences not provided for in the classification." Each was a subject present in DDC's *Pure Science* (5), but absent among the BCS subclasses [23]. With this small announcement, Doyle showed again both her use of and respect for the DDC system.

Social Sciences (200)

Social Sciences (200) included a mix of LC-influenced subclasses and original subclasses [24]. The BCS *Social Groups* (220) subclass included subdivisions regarding family, marriage, home, children, youth, women, associations, communities, and races. These categories were prominent features of LC subclasses *Social Groups* (HQ), *Associations* (HS), and *Other Social Groups* (HT) [25]. Likewise, Bellevue's *Economics* (260) comprised LC subclasses *Economic History* (HD), *Transportation and Communication* (HE), *Commerce* (HF), and *Finance* (HG).

Neither the remaining BCS *Social Science* (200) subclasses nor their particular subdivisions appeared in any other classification system. As such, this section appears to be the first in the BCS where Doyle utilized contemporary nursing curricula and literature to create appropriate divisions [26]. Browsing the 200s leads to the subclass *Social Pathology* (230), followed directly by *Poverty, Dependency, Pauperism* (231); *Unemployment (industrial waste, other problems of labor)* (234); *Vagrants and Vagrancy* (238); and *Other Social Problems (immigration, race and population problems)* (239) [27]. In choosing to include these particular categories under subclass of "social pathology," the BCS aligned nursing thought to several currents of the early twentieth-century middle-class political thinking. Poverty, dependency, pauperism, unemployment, vagrants, and immigration were issues on the national Progressive agenda of the 1910s and 1920s [28]. During the Great Depression, these issues presented themselves at even greater levels. The subsequent BCS *Social Therapy* (240) subclass therefore arose as especially valuable. Under this subclass, nursing looked to counter social ills with *Social Work Practice (relief, prevention, correction, control)* (241); *Public Welfare Agencies (federal, state, county, municipal, including Red Cross)* (243); and *Insurance and Pensions, Compensations and Indemnities* (247) [29].

These subclasses and subdivisions highlight the direct interest Doyle believed nurses had in a patient's social environment. This relationship, entwining care of the body with care of the physical environment, linked Doyle to the thinking of public health leaders such as Lillian Wald and her Henry Street Settlement nurses [30]. Based in New York City, the early materializations of Wald's public health nursing movement would have been highly visible to Doyle in both her professional and public spheres as she conceptualized the BCS. This subject area also connects Doyle to the curricular reforms of her day.

Certainly, the social sciences were an emerging component of the early twentieth-century nursing curriculum [31].

The *Education and Recreation (social institutions)* (280) subclass also holds a certain amount of interest. Subsumed beneath the *Nursing Education and Schools of Nursing* (287) subdivision were twenty-four specific components of nursing education including emerging facets such as: *Nursing School Library* (287.35); *Theory* (287.41); *Postgraduate Education* (287.7); *Graduate Courses in Universities* (287.72); and *Research, Studies, Statistics* (287.8) [32]. The sheer number of entries at the decimal level, the most detailed level of specificity in the BCS, warrants consideration. The proper representation of nursing education, of each of its facets, was of chief concern to Doyle. The BCS provided an opportunity to do just this. Within this section, traditional aspects of concern for nursing education like *Organization and Administration of School of Nursing* (287.1), *Faculty* (287.2), and *Students* (287.3) were classified alongside the earlier mentioned developing areas of nursing. In this small component of the BCS, voice was given to rising currents in the nursing educational system. Nursing libraries, university education, and nurse-led research were movements underway. The BCS provided a unique medium through which the printed materials of these movements could claim a legitimized place of intellectual publicity.

Nurses and Nursing (300)

Even more unique than the above-mentioned class, the BCS's *Nurses and Nursing* (300) exhibited very little similarity to any contemporary classification schemes [33]. Featuring subclasses such as *Institutional Nursing* (310) and *Private Duty Nursing* (330), this section of the BCS concerned itself with the arrangement of mostly administrative and organizational aspects of nursing literature. While this focus on administrative spheres resembled the NHL subdivisions *Institutional Nursing* (554) and *Private Duty Nursing* (555), the NHL neglected to expand these subdivisions to deeper levels of specificity [34]. *Nurses and Nursing* (300) provided deeper levels of classification. It classified considerably more administrative and organizational aspects of nursing including *Governmental Nursing Agencies* (340), *Nursing by Religious* (360), and *Nursing in Special Fields* (370).

The BCS's nursing section differed considerably from LC's *Nursing* (RT) [35]. Whereas *Nursing* (RT) was more of a catch-all for nursing information, the BCS's nursing section had a very narrow focus. Unlike in the LC, applied (clinical) nursing knowledge was not organized within *Nurses and Nursing* (300). Instead, Doyle stratified these domains into corresponding sections within *Medicine* (400); *Food, Nutrition, and Dietetics* (600); or *Public Health* (700). In this way, Doyle subsumed clinical nursing knowledge under the domain of medicine (and other applicable health fields), while the administration and organization of the discipline was nested under that of

nursing. Doyle was not interested in challenging the traditional organizational hierarchy of medical practice. Her classification system reflected a belief that the knowledge needed by a clinical nurse remained within the domain of the medical specialty in which she practiced. However, the organization, administration, and education of nurses (see *Social Sciences* (200)) within these clinical realms were the domains of nursing alone.

Medicine (400)

There were marked similarities between the subclasses and subdivisions of BCS's *Medicine* (400) and those found throughout the Ballard [36, 37]. Indeed, the influence of the Ballard seemed greatest on this section of the BCS. The BCS *Practice of Medicine (special and specific)* (410) subclass readily reflected the contents of Ballard classes *Parasitology. Parasitic Diseases. Mycoses* (10), *Diseases Due to Specific Infection* (11) and (12), and *Disorders of Metabolism* (13). For example, the BCS *Typhoid Fever* (411.18) subdivision was analogous to Ballard's *Typhoid Fever* (12P), while BCS's *Measles* (411.52) was akin to Ballard's *Measles* (11V). Furthermore, *Other Bacterial Infections* (411.19) featured a note instructing readers to include in this subdivision "Asiatic cholera; Bacillary dysentery; Cerebrospinal fever; Colon bacillus infections; Erysipelas"; each disease mentioned was a specific subdivision in the Ballard, a subdivision that each did not occupy individually in the BCS [38]. This note was meant to guide the cataloger's hand, yet it also allows us to see firsthand Ballard's influence on Doyle.

Subdivisions under BCS's *Practice of Medicine (systemic)* (420) offered another example of how Doyle collapsed distinct Ballard classes to fit the needs of nursing and the structure of the BCS. Ballard classes *Blood, Lymphatics and Ductless Glands. Internal Secretions* (14), *Circulatory System* (15), *Digestive System* (16), *Genito-Urinary System* (17), *Locomotor System. Orthopedics* (18), *Nervous System* (19), *Respiratory System* (20), and *Dermatology* (27) became particular subdivisions of the BCS's *Practice of Medicine (Systemic)* (420). Within this subclass, the BCS subdivision *Neurology, Psychiatry, and Psychiatric Nursing, Psychoanalysis, Diseases of the Nervous System Including Insanity* (427) is intriguing. Doyle chose to elevate psychiatry and psychoanalysis to the same conceptual level as neurology. She was not content to nestle these under a simple subdivision such as *Diseases of the Nervous System*, as the Ballard did with *Nervous System* (19). Doyle's subdivision alluded to a more modern notion of health care. Psychiatry was a discipline related to, yet distinct from, neurology.

Indeed, Doyle displayed a consistent willingness to approach and represent diverse facets of mental health. The classes *Natural Science* (100), *Medicine* (400), and *Philosophy, Psychology, Religion* (800) each contained applicable subjects on the psyche. Nurse-historian Olga Church has described the early twentieth century as a period of increased opportu-

nity and visibility for psychiatric nurses. Curricular concerns, organizational representation, and complex relationships with psychiatrists typified the issues with which psychiatric nurses grappled [39]. Doyle, while not a psychiatric nurse, exhibited her appreciation and understanding of this burgeoning field of health care at multiple points throughout the BCS.

Doyle also reached to the LC in *Medicine* (400). Subclasses *Obstetrics* (440), *Pediatrics* (450), and *Gynecology* (460) exhibited subdivisions closer to the LC than to those of Ballard. For instance, the BCS *Abortion, Miscarriage, Premature Birth* (443) subclass contained syntax similar to LC *Abortion. Miscarriage. (Natural)* (RG 648) [40]. Ballard did not have an analogous subclass; works on abortion would be catalogued under the particular phenomena that preceded the event, for instance, *Toxemia of Pregnancy. Eclampsia* (25K). As a rule, the Ballard clustered clinical materials around the diseases or pathophysiologic states of particular anatomical structures. The LC organized *Medicine (R)* subdivisions according to clinical specialty area, further divided by pathological states common to each. Doyle chose to do both: she followed the Ballard model in her *Practice of Medicine* subdivisions, while she aligned subjects such as *Obstetrics* (440), *Pediatrics* (450), and *Gynecology* (460) more closely to the LC arrangement. This particular approach is not surprising. During the twentieth century, medicine as a discipline was struggling to adopt a uniform nomenclature of disease [41]. Illnesses changed names depending on the geographic location of diagnosis. Medical libraries, like the Boston Medical Library and the Library of Congress, were thus free to develop their own somewhat arbitrary representations of medical knowledge. Doyle's decision in *Medicine* (400) to combine the choices of both libraries was simply another variant of this phenomenon.

Hospital Economy (500)

Hospital Economy (500) exhibited little resemblance to any of the contemporary classification systems [42]. The LC organized *Hospitals and Dispensaries* (RA 960–996), yet few LC subclasses overlapped with those of the BCS. BCS subclasses such as *Medical and Surgical Departments of Hospital* (530), *Nursing Department of Hospital* (540), *Dietary Department of Hospital* (550), *Housekeeping Department of Hospital* (560), *Engineering Department of Hospital* (570), and *Laundry and Cleaning* (580) were completely unique. As a class, *Hospital Economy* (500) represented a substantial component of Doyle's classification system. The hospital was not simply a practice environment. To Doyle, it was a locus of the nursing profession. Significant as this point is, the physical presence of *Hospital Economy* (500) does not alone connote the importance Doyle attributed to its subject areas.

The very use of the term "hospital economy" evokes connections to another movement, that of "home economy." Historian Susan Reverby has pointed out the early twentieth century connections

between nursing and home economics [43]. Adelaide Nutting, a leading figure in nursing, frequently presented papers on institutional management during the “Lake Placid Conferences on Home Economics” (organized by none other than DDC creator, Melvil Dewey and his first wife Annie). Interested in the expanded understanding and appreciation of the scientific principles implicit in “women’s work,” home economics theory intrigued nursing leaders. Leaders of the home economics movement hoped to elevate the perceived position of women who worked in the home. As many duties of the hospital nurse echoed those of women at home, Doyle surely hoped that mention of “hospital economics” would both link nursing to this feminine, scientific movement and elevate nursing’s autonomy and professionalism.

Food, Nutrition, and Dietetics (600)

A chief component of early twentieth-century hospital nursing was the promotion, preparation, and provision of special diets for patients. The BCS *Food, Nutrition, and Dietetics (600)* was a unique composite of relevant information [44]. No similarities between this class and the contemporary classification systems existed. Food preparation, economics of consumption, therapeutic aspects of foods, infant feeding, and classes of foods fell clearly within the domain of nursing. Of course, each was also a historically feminized endeavor. Acknowledgment of this brings to light an important finding. The BCS’s most feminized classes—*Social Sciences (200)*, *Nurses and Nursing (300)*, *Hospital Economy (500)*, and *Food, Nutrition, and Dietetics (600)*—were also discovered to be the most distinct. The DDC, LC, Ballard, and NHL systems consistently failed to articulate non-masculine knowledge domains. Doyle, by nature of her profession, well understood the necessity of such information. Her BCS gave such subjects voice. It reserved a place for them, alongside the traditionally masculine fields of medicine, natural science, and philosophy.

Public Health (700)

Not surprisingly, the BCS *Public Health (700)* featured several similarities to the NHL classification system [45]. The BCS subclass *Communicable Disease Control (720)* subclass consisted of extensive subdivisions regarding the control of tuberculosis and venereal diseases. Each of these subjects received exceedingly detailed coverage under the NHL *Communicable Diseases (230)* subclass. Likewise, Bellevue subclasses *Maternity and Child Hygiene (730)*, *Public Sanitation and Hygiene (740)*, *Industrial Hygiene (750)*, and *Health Services (780)* were constructed with remarkable similarity to analogous segments of the NHL’s system [46].

Conversely, BCS’s *Public Health Nursing (770)* and NHL’s *Public Health Nursing (250)* contained very few similarities. A note in the BCS advised that its particular subclass applied to public health nursing

“as an aspect of community health organization” [47]. The NHL rather utilized the subclass to organize a broad swath of public health nursing information. In this way, the NHL’s conceptualization of public health nursing echoed the BCS’s earlier, more generic *Public Health Nursing (320)* subclass found in *Nurses and Nursing (300)*. The dual appearance of “public health nursing” was both a nod to the importance of public health practice in nursing and an example of Doyle’s attempts to articulate the intricacies of nursing’s domain of knowledge. Like the hospital, public health offered nursing a critical practice environment. Public health nursing promised expanded practice roles and less direct physician oversight, often attractive options to the early twentieth-century American nurse [48].

Philosophy, Psychology, Religion (800)

Harking back to earlier segments of the BCS, *Philosophy, Psychology, Religion (800)* was patterned heavily upon the DDC, namely *Filosofy (100)* [49, 22]. The DDC articulated psychology as a part of philosophy: *Psychology (150)*. Doyle chose to follow suit in the BCS, yet she allowed the discipline equal footing, placing it prominently in the class title alongside philosophy and religion. Her elevation and coinciding expansion of psychology denotes Doyle as someone comfortable with the then fledgling discipline. This is of course a bit unsurprising when one recalls the ever-increasing familiarity nurses had with the psychiatric realm [39].

Most interesting though is the fact that only four of the ten possible subclasses were assigned subjects in *Philosophy, Psychology, Religion (800)*. Furthermore, of the subclasses that were assigned, a notable lack of subdivisions existed. *Religion (840)* for instance, contained only *Mythology (841)*, *Superstition (842)*, and *Faith Healing (849)*. Reasons behind such omissions are entirely lacking. It is notable that Doyle was certain of the necessity of this class but unwilling to define many of its subclasses. This lack of specificity may have been in anticipation of nursing libraries with special interests, particularly those of religious training schools and their desire to exert intellectual control over contents deemed especially important to their particular educational missions. At least one library, Sisters of Charity Hospital School of Nursing in Buffalo, New York, chose to completely recast *Religion (840)* [50]. Subdivisions 840–848 were made to classify specific features of the Catholic religion such as *Sacraments (843)* and *Church and the World (847)*. Subdivision 849 was reserved for *Non-Catholic Religions* where, by no doubt sheer coincidence, *Protestant Sects (849.1)* were organized aside the resituated domains of *Superstition (849.2)* and *Mythology (849.3)*.

General Culture (900)

General Culture (900) is best described as a grand, semantically similar compilation of DDC subclasses *Useful Arts (6)* (excluding *Medicine 610*), *Fine Arts (7)*,

Literature (8), and *History* (9) [22, 51]. Within one BCS class, Doyle delivered an arching overview of approximately one-third of DDC subclasses. BCS subclass *Fine Arts (General)* (960), for instance, contained subdivisions such as *Painting* (962), *Architecture and Landscape Gardening* (964), and *Amusements* (966). Each subject appeared verbatim in the DDC; however, in Dewey they existed as subclasses rather than subdivisions.^{***} Overall, *General Culture* (900) provided an interesting summation of the way Doyle structured hierarchical models of knowledge differently from Dewey. The proper education of a nurse demanded access to wide swaths of information, organized in a fashion that she herself saw fit.

The BCS's *General Culture* (900) was created not only for the recreational perusal of student nurses, as books were also seen as therapeutic adjuncts to patient care. The subjects organized within *General Culture* (900) (literature, history, fine arts) typified the types of books encouraged for patient perusal [52]. Books read aloud to, or silently by, patients were lauded as "another means of resting tired bodies and easing weary minds" or in the words of one librarian as "Materia Libraria" [53]. Books as agents of health would have therefore been welcomed in the Bellevue School of Nursing Library. Of course, literary works could psychologically benefit tired, weary nursing students just as much as they did patients. Furthermore, a literate, well-read nurse projected a bright-minded woman with middle-class sensibilities. Doyle, convinced of the library's powers of intellectualization and professionalization, did not overlook the edifying nature of *General Culture* (900) [54].

DISCUSSION

The BCS was a unique development of the nursing library movement, intrinsically linked to turn-of-the-last-century America's burgeoning library culture. Other products of this culture—the DDC, LC, Ballard, and the NHL classification, each classification system of influence on Doyle—projected nursing as neither a particularly encompassing nor a particularly dynamic knowledge domain. They did not capture the practice, or the mind, of the early twentieth-century nurse. These systems though, served Doyle as both catalysts and reference points. The BCS thus provided Doyle the opportunity to construct and promote a distinct viewpoint of nursing knowledge. Specifically, the BCS allowed Doyle to portray nursing as an intellectual and professional discipline.

The BCS presented nursing as a contemporary, socially relevant discipline. Mental health, psychiatric nursing, and book therapy were emerging issues

among turn-of-the-last-century medical circles, including nursing leaders. Doyle integrated subjects relevant to each into the BCS. Doyle also linked nursing knowledge to the social sciences through the organization of key elements (i.e., social therapy, nursing education) in the BCS *Social Sciences* (200) class. In many ways, social science was the ingénue of early twentieth-century academia, a discipline ripe with social relevance and intellectual respect.

Other disciplines also contributed intellectual heft to the BCS. The inclusion of natural and medical sciences (*Natural Sciences* (200) and *Medicine* (400)) attested to nursing's intellectual presence. Doyle's modification of established library classification systems to adequately represent the social, natural, and medical sciences showcased nursing's mastery of and comfort with such knowledge. Furthermore, the physical structure of the BCS, akin to the DDC, linked nursing thought to Dewey's established, respected canon of knowledge. The very presence of literature in nursing's repertoire also furthered the intellectual image and capabilities of the nurse.

Perhaps most important to Doyle was the ability of the BCS to broadcast nursing's professional nature. *Nurses and Nursing* (300); *Hospital Economy* (500); *Food, Nutrition, and Dietetics* (600); and *Public Health* (700) were major components of the BCS. Each of these topics was un- or under-articulated among contemporary classification schemes. Yet, they represented major domains of nursing practice. When combined with classes of unquestionable intellectual reputation, these BCS classes defined nursing as a field of unique scope. Nursing, defined by this distinct intellectual range, thus achieved an important principle of professionalism. The parallels between nursing and other feminized fields of knowledge that sought legitimization, such as home economics, provide an additional example of the professional image of nursing that Doyle attempted to project through the BCS.

CONCLUSION

Doyle understood nursing to be a discipline necessitating access to ever-increasing amounts of both specialized and generalized areas of knowledge. The BCS was the platform from which she could highlight nursing's burgeoning educational and professional opportunities. It was a place to represent and reinforce core tenets of early twentieth-century nursing. It was also a space where she could construct and project a legitimate place for broader spheres of traditionally feminized knowledge, organized in a fashion unique to the nurse's needs. In creating the BCS, Doyle never had the goal of simply arranging her library's books. Rather, one bookshelf at a time, Doyle strove to represent the breadth and depth of nursing knowledge, ensure the consistency of that knowledge, and ultimately foster the growth (and legitimize the image) of nursing as a "distinct professional discipline" [12].

^{***} Another example borrowed from Dewey was the BCS *Literature Including Philology* (910) subclass, which featured subdivisions *Poetry* (911); *Voice, Diction, Oratory, Debate* (916); and *Humor* (918). These subdivisions were directly akin to subdivisions in Dewey's division for American literature: *American Literature* (810), *American Poetry* (811), *American Oratory* (815), and *American Satire and Humor* (817).

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